SPECIFICATION

Please amend the last two paragraphs on page 6, lines 19-37 as follows:

As illustrated in Fig. 1, crude oil, gas and water from well 100 may be piped to separator 108 via inlet 116. Gas at wellhead pressures in separator 108 supplies the lift gas to be compressed in compressor 102, which may be used as lift gas or stored or sold as production gas, supply gas for pressure monitoring information, and fuel for power supply 106. Oil in separator 108 supplies heated oil for injection into well 100, crude oil produced for storage or sale, and coolant for compressor 102. Water in separator 108 supplies heated water for injection into well 100 and coolant for compressor 102. Liquids may be injected after adding chemicals via valve 118 and inlet 120. The transfer of the heat of compression from the gasses being compressed in compressor 102 to liquids mixed, for example after their introduction into compressor 102 via valve 118, with said gasses being compressed in compressor 102 may be referred to herein as "internal thermodynamic exchange". Power supply 106 supplies the power for pump 104, which moves the fluid that powers compressor 102. Compressor 102 compresses gas from the wellhead pressure to the pressure necessary for lifting liquids through well 100 and supplies heat to the surrounding liquids in separator 108. The transfer of the heat of compression from gasses being compressed in compressor 102 to external liquids and gasses, for example liquids and gasses in separator 108, may be referred to herein as "external thermodynamic exchange". The gasses and liquids that are heated and cooled by external and internal thermodynamic exchange as referred to herein as "thermodynamically treated fluids".

Figure 2 further illustrates the TRS with a HEC compressing gasses for lifting and production in the backwash production context. In the embodiment illustrated in Fig. 2, cooled compressed gas is injected from compressor 200 into bore hole 202 of well 204 to the bottom of tubing 206, which is down hole 202 sufficiently far to be immersed in liquid 208 in subterranean formation 210. When the compressed gas reaches the bottom of tubing 206, it escapes into casing 212 in hole 202. Since the compressed gas is lighter than liquid 208, the gas rises through liquid 208 as bubbles. Herein the combined action of gas flowing into casing 212 under the surface of liquid 208 and the flow of liquid 208 from the

subterranean reservoir upward through casing 212 indicated by the arrows in Figure 2 is referred to as "plunger action". During its trip upward through casing 212, the surrounding pressure decreases and the bubbles become larger. As is well known in the art, this action causes the gas to lift liquids above it toward well surface 214. When the bubbles and lift liquids reach surface 214, they enter separator 216, which also houses compressor 200. Optionally, compressor 200 may be used to simultaneously inject heated liquids recovered from well 204 back into well 204 for maintenance thereof.